REMARKS

Applicants appreciate the Examiner's thorough consideration provided the present application. Claims 13-21 and 26-59 are now present in the application. Claims 26, 28, 43 and 44 have been amended. Claims 49-59 have been added. Claims 26, 43, 44, 49, 58 and 59 are independent. Reconsideration of this application is respectfully requested.

No Treatment Of Claims On The Merits

The Examiner in the instant Office Action did not raise any rejection against dependent claims 47 and 48, which were entered by the Amendment filed November 18, 2004. Therefore, it is believed that claims 47 and 48 in condition for allowance.

However, if the Examiner does not agree and raises new rejection(s) against claims 47 and 48 in the next Office Action, Applicants respectfully submit that the next Office Action must be made non-final because the Examiner failed to treat claims 47 and 48 on the merits in any previous Office Action. Nonetheless, it is still believed that claims 47 and 48 are allowable. Favorable consideration and allowance of claims 47 and 48 are respectfully requested.

Claim Rejections Under 35 U.S.C. § 103

Claims 20 and 26-46 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Shlomot et al., U.S. Patent No. 5,699,481 (hereinafter "Shlomot"), in view of Shepard, U.S. Patent No. 5,943,347 (hereinafter "Shepard"), and further in view of Henley et al., U.S. Patent No. 5,526,353 (hereinafter "Henley"). Claims 13-19 and 21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Shlomot in view of Shepard and Henley, and further in view

of Kubin, "Time Scaled Modification of Speech Based on a Non-linear Oscillator Model" (hereinafter "Kubin"). These rejections are respectfully traversed.

Complete discussions of the Examiner's rejections are set forth in the Office Action, and are not being repeated here.

Independent claim 26 recites a combination of steps including "producing an expanded portion after the determining step, wherein:...the expanded portion corresponding to a different amount of the received sound signal than either the first or second received frame, and the first signal frame and the expanded portion have different time lengths in the sound signal".

Independent claim 43 recites a combination of steps including "producing a first expanded portion after the first-listed determining step, wherein:... the first expanded portion has a different size than either the first or second received frames" and "producing a second expanded portion after the second-listed determining step, wherein:... the second expanded portion has a different size than either the third or fourth received frames, and the first and third signal frames have a frame size that is different from a size of the first expanded portion".

Independent claim 44 recites a combination of steps including "producing an expanded portion after the determining step, wherein:... the expanded portion has a size that is different than a frame size of the first signal frame".

Applicants respectfully submit that the combinations of steps as set forth in independent claims 26, 43 and 44 are not disclosed or suggested by the references relied on by the Examiner.

The Examiner has correctly acknowledged that Shlomot fails to teach "the expanded portion corresponding to a different amount of the received sound signal than either the first or second received frame" as recited in claim 26 and "the first expanded portion is a different size

than either the first or second received frames" and "the second expanded portion is a different size than either the third or fourth received frames" as recited in claim 43. The Examiner turned to rely on Shepard and alleged that Shepard in col. 3, line 35 through col. 5, line 24 teaches the above recitations. Applicants respectfully disagree.

In particular, Shepard discloses that a fundamental pitch period is defined as the lowest common tone for a packet and that multiples of the fundamental pitch period are used as a substitute for the data that is missing or erroneous (see col. 3, lines 63-67; col. 4, lines 1-4). Shepard also discloses that if it is determined that an error had occurred, the fundamental pitch period is retrieved from the preamble of the previous data packet and the amount of data that is in error or that was dropped is determined and that a corresponding amount of substitute data is synthesized by replicating the fundamental pitch period of the previous packet (see col. 4, lines 25-35). In other words, Shepard simply discloses that the amount of data that is in error or that was dropped would be substituted by the corresponding amount of replicated data by replicating the fundamental pitch period of the previous packet. Therefore, Shepard discloses that the replicated data has the same amount/size as the missing signal frame in order to replace the missing signal frame. Therefore, Shepard fails to teach "the expanded portion corresponding to a different amount of the received sound signal than either the first or second received frame" as recited in claim 26 and "the first expanded portion has a different size than either the first or second received frames" and "the second expanded portion has a different size than either the third or fourth received frames" as recited in claim 43.

Although the Examiner in his Advisory Action dated October 21, 2004 alleged that Shepard's teaching of inserting replicated data by a single period or possibly ten periods would

necessarily require the expanded portion to be of different size than a signal frame (see page 2, lines 6-8), Applicants respectfully disagree.

Specifically, Shepard discloses that if the packet were to correspond to a low tone, the entire data packet might be represented by a single fundamental pitch period because low frequencies translate into longer periods, and that, on the other hand, if the data packet were to correspond to a high tone, it might be required to replicate the fundamental pitch period up to ten times (see col. 4, lines 38-44). Shepard also discloses "the fundamental pitch period is replicated the requisite number of times in order to "fill in" the data that was dropped or lost during transmission." (Emphasis added; see col. 4, lines 33-35). In other words, the purpose of replicating the fundamental pitch period to one or multiple of times is to match the length of the lost data packet in order to fill in the lost data packet. Therefore, Shepard does not teach the expanded portion to be of different size than a signal frame as suggested by the Examiner in his Advisory Action dated October 21, 2004.

The Examiner has also correctly acknowledged that Shlomot and Shepard fail to teach "the first signal frame and the expanded portion have different time lengths in the sound signal" as recited in claim 26, "the first and third signal frames have a frame size that is different from a size of the first expanded portion" as recited in claim 43 and "the expanded portion has a size that is different than a frame size of the first signal frame" as recited in claim 44. However, the Examiner alleged that Henley in col. 13, line 36 through col. 15, line 46 teaches the above recitations. Again, Applicants respectfully disagree.

In particular, Henley in col. 13, line 36 through col. 15, line 46 merely teaches that the audio data samples 380 have various sizes and variable transmission and the position identifiers

370 in the data packet would direct each audio data sample 380 into specified absolute positions of the receiving buffer 510 (see FIG. 5; col. 14, lines 11-19). Henley also discloses that the audio data sample 380 is thereby synchronized with adjacent audio data samples 380 to compensate the variable periods of the transmission time (see col. 16, lines 23-29). However, Henley nowhere teaches any method to fill the gap of the lost audio data samples 380 or any expanded portion for the missing or erroneous audio data sample 380, and therefore cannot teach the size of the expanded portion. Therefore, Henley also fails to teach "the first signal frame and the expanded portion have different time lengths in the sound signal" as recited in claim 26, "the first and third signal frames have a frame size that is different from a size of the first expanded portion" as recited in claim 43 and "the expanded portion has a size that is different than a frame size of the first signal frame" as recited in claim 44.

In fact, Henley discloses that if a received data packet is invalid, the packet is disregarded and the disassembling process for that packet terminates (see FIG. 7; col. 16, lines 12-16). In other words, the audio data sample 380 in that particular packet is disregarded and no data would be filled in the corresponding absolute position of the receiving buffer 510. Therefore, it teaches away from modifying Shlomot and Shepard in view of Henley because Henley suggests disregarding the invalid packet and terminating the disassembling process for that packet.

In addition, as mentioned, Henley's position identifiers (PI) 370 in the data packet will direct each audio data sample 380 into specified absolute positions of the receiving buffer 510 (see FIG. 5, col. 14, lines 17-19). Henley also discloses that the audio data sample 380 is synchronized with adjacent audio data samples 380 to compensate the variable periods of the transmission time (see col. 16, lines 23-29). In other words, each audio data sample 380 has its

corresponding absolute (i.e., fixed) position in the receiving buffer 510 and one audio data sample 380 is immediately followed by a next audio data sample 380. Therefore, there is no flexible space in the receiving buffer 510 for any expanded portion. In fact, it is unnecessary to insert the expanded portion following an audio data sample 380 in order to wait for the next, delayed audio data sample, because Henley states that the variable periods of the transmission time have been compensated by using the position identifiers 370 to assign the absolute positions of the audio data samples 380. Accordingly, one skilled in the art would not have the motivation to modify Shlomot and Shepard in view of Henley because Henley suggests that the delay of the audio data sample has been compensated.

With regard to the Examiner's reliance on Kubin, this reference has only been relied on for its teachings related to the subject matter of dependent claims. Kubin also fails to disclose the above combinations of steps as set forth in independent claims 26, 43 and 44. Accordingly, Kubin fails to cure the deficiencies of Shlomot, Shepard and Henley .

Accordingly, none of the references relied on by the Examiner individually or in combination teach or suggest the limitations of independent claims 26, 43 and 44. Therefore, Applicants respectfully submit that independent claims 26, 43 and 44 clearly define over the teachings of the utilized references.

In addition, claims 13-21, 27-42, 45 and 46 depend, either directly or indirectly, from independent claims 26 and 43, and are therefore allowable based on their respective dependence from independent claims 26 and 43, which are believed to be allowable.

In view of the above remarks, Applicants respectfully submit that claims 13-21 and 26-46 clearly define the present invention over the references relied on by the Examiner. Accordingly,

reconsideration and withdrawal of the rejections under 35 U.S.C. § 103 are respectfully requested.

Additional Claims

Claims 49-59 have been added for the Examiner's consideration.

Applicant respectfully submits that the combinations of elements as set forth in new independent claims 49, 58 and 59 are not disclosed or suggested by the references relied on by the Examiner.

In addition, claims 50-57 depend, either directly or indirectly, from new independent claim 49, and are therefore allowable based on their respective dependence from new independent claim 49, which is believed to be allowable.

Favorable consideration and allowance of claims 49-59 are respectfully requested.

CONCLUSION

All the stated grounds of rejection have been properly traversed and/or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently pending rejections and that they be withdrawn.

It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact the undersigned at (703) 205-8000 in the Washington, D.C. area.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicants respectfully petition for a two (2) month extension of time for filing a response in connection with the present application and the required fee of $450.00 is attached herewith.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By _____

Paul C. Lewis
Registration No.: 43,368
BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Road
Suite 100 East
P.O. Box 747
Falls Church, Virginia 22040-0747
(703) 205-8000
Attorney for Applicant